

Name: _____ Date: _____

Practice: Solving Equations with Variables on Both Sides

Solve each equation for the given variable. If it has no solution, write *no solution*. If it has infinitely many solutions, write *infinitely many*.

1. $5m + 3 = 3m + 9$

2. $-36 + 2w = -8w + w$

3. $3a + 4 = a + 18$

4. $14 - (2q + 5) = -2q + 9$

5. $6x + 1 = 6x + 8$

6. $6x = 4(x + 5)$

7. $5m - 2(m + 2) = -(2m + 15)$

8. $9 + 5a = 2a + 9$

CRYPTIC QUIZ

1. Why does Beethoven now spend all his time erasing music?

16 6 -4 10 -3 6 -9 7 20 -5 7 10 -4 3 21

2. What is it called when a sea bird lands on a channel marker?

-36 9 7 -8 20 6 6 -2 10 21 9 11 11

3. How does a tree feel after a hard day at work?

-36 9 10 16 6 -3

TO DECODE THE ANSWERS TO THESE QUESTIONS:

Solve each equation below and find your answer in the code. Each time the solution appears, write the letter of that exercise above it.

(O) $8u = 3u + 35$

(N) $7y = 33 - 4y$

(E) $2x + 48 = 10x$

(T) $5t - 26 = 18t$

(I) $k = 8k + 28$

(G) $-30n = -27n - 63$

(H) $4x + 4 = 2x + 36$

(D) $9y - 1 = y - 25$

(P) $14p - 8 = 22 + 20p$

(L) $z + 81 = 9z - 7$

(Y) $39 - 12w = 7 - 16w$

(C) $-15v - 40 = 23 - 8v$

(M) $63 - x = 2x + 3$

(U) $3n + 46 = 1 + 8n$

(B) $12r - 18 = 13r + 18$

(S) $-x - 1 = x - 21$